

REMARKS/ARGUMENTS

Claims 1, 2, 6, 7, 27 and 28 are pending. A typographic error has been corrected in claim 7.

The Information Disclosure Statement

An initialed copy was attached to the Office Action. However, this was the same copy as that on which the Examiner had previously crossed-off the references. Also references 33-35 were not initialed, apparently inadvertently. To avoid confusion, Applicants provide a clean copy of the Information Disclosure Statement, and request the Examiner to return an initialed version of this with the next communication.

In a telephone conversation with Applicants' representative Sean Brennan on October 27, 2004, Supervisory Examiner Wang suggested that the reason that the Information Disclosure Statement in question, which was submitted to the PTO on December 7, 2001; had not been considered until after allowance of the present application was that the Examiner had not received copies of the references in the present application. Applicants note for the record that the references were received by the PTO on December 31, 2001 (copy of stamped post card attached). Furthermore, having reviewed the file, Applicants are unable to find any notification from Examiner Wessendorf that the references were not received, nor any request from Examiner Wessendorf for re-submission of the references. Moreover, Applicants made numerous attempts to determine whether the Information Disclosure Statement had been considered¹, but were unable to obtain an answer from Examiner Wessendorf as to whether she had, or had not, considered the Information Disclosure Statement. As a result, Applicants were forced to file this RCE, after all pending claims had been allowed, solely for the purpose of **determining whether** the Information Disclosure Statement had been considered.²

¹ See, for example, communications mailed on April 15, 2004 and February 26, 2004. Numerous telephone calls were also placed to Examiner Wessendorf during the period between Allowance (January 15, 2004) and filing of the RCE (April 15, 2004) to determine whether the IDS had been considered.

² Applicants wish to emphasize that the RCE was filed not to enter the IDS, but to determine whether an IDS that had been entered almost two and one-half years previously had been considered.

As a result of the failure to receive timely consideration of the IDS (and, indeed, the failure of the Office to inform Applicants, following numerous requests, whether their IDS had been considered), it was necessary to withdraw the application from allowance and file the instant RCE. Consequently, the term of any patent to be granted on the present application has been adversely affected. Accordingly, Applicants reserve the right, in a separate communication, to petition for an extension of term on any patent to be issued from the present application.

Priority

The Examiner alleges that claim 1 is not entitled to priority of the British application filed May 23, 1997.³ The Examiner does not say which element she believes is missing from the claim. Applicants do not agree with the Examiner's position. However, the issue is moot because the Isalan et al. reference is not prior art for other reasons, as discussed below.

Claim Rejections under 35 USC 103

All claims stand rejected as obvious over Greisman in view of Isalan et al. and Choo. The Greisman and Choo references were extensively discussed in Applicants' Appeal Brief (dated September 16, 2003). Insofar as the Examiner's comments regarding these references are inconsistent with Applicants' comments in the Appeal Brief, applicants respectfully disagree. It is, however, unnecessary to consider the merits of the rejection as a whole because the newly cited Isalan et al. reference on which the rejection is premised is not prior art. The authors of Isalan et al. (Isalan, Choo and Klug) are the co-inventors of the present application. Isalan et al. was published May 27, 1997 (see attached MedLine abstract). The present application has an international filing date of May 26, 1998. Isalan et al. is not prior art under 35 USC 102(a) because it is a publication by the present inventive entity. Isalan et al is not prior art under 35 USC 102(b) because it was published less than one year before the international filing date of the present application. Therefore Isalan et al. is not prior art with

³ Applicants assume for the purposes of this response that the Examiner is referring to GB 97 10809.6. Otherwise, clarification is requested.

Appl. No. 09/424,482
Amdt. dated November 5, 2004
Reply to Office Action of September 22, 2004

PATENT

respect to the present claims (irrespective whether the claims are entitled to their British priority date). Because Isalan et al. is not prior art, a rejection over Isalan in combination with other references cannot stand.

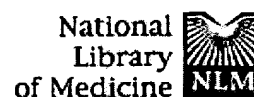
If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



Joe Liebeschuetz
Reg. No. 37,505

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Synergy between adjacent zinc fingers in sequence-specific DNA recognition.

Isalan M, Choo Y, Klug A.

Medical Research Council Laboratory of Molecular Biology, Hills Road, Cambridge CB2 2QH, United Kingdom.

Zif268-like zinc fingers are generally regarded as independent DNA-binding modules that each specify three base pairs in adjacent, but discrete, subsites. However, crystallographic evidence suggests that a contact also can occur from the second helical position of one finger to the subsite of the preceding finger. Here we show for the three-finger DNA-binding domain of the protein Zif268, and a pair of variants, that deleting the putative contact from finger 3 can affect the binding specificity for the 5' base in the adjoining triplet, which forms part of the binding site of finger 2. This finding demonstrates that Zif268-like zinc fingers can specify overlapping 4-bp subsites, and that sequence specificity at the boundary between subsites arises from synergy between adjacent fingers. This has important implications for the design and selection of zinc fingers with novel DNA binding specificities.

PMID: 9159121 [PubMed - indexed for MEDLINE]

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RPTO/SB/21 (08-00)

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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/424,482	
	Filing Date	02/29/00	
	First Named Inventor	Choo	
	Group Art Unit	1627	
	Examiner Name	Wessendorf, T.	
Total Number of Pages in This Submission	1	Attorney Docket Number	019496-006210US

ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition Routing Slip (PTO/SB/69) and Accompanying Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): 1) one hundred eighty (180) reference copies 2) PTO SB08A/08B 3) Return Receipt Postcard
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm and Individual name	Townsend and Townsend and Crew LLP Joe Liebeschuetz Reg No. 37,505
Signature	
Date	December 7, 2001

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date:			
			December 7, 2001
Typed or printed name	Chris Fitting		
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Documents:

- 1) Supplemental Information Disclosure Statement Under 37 CFR §1.97 and §1.98
- 2) Form PTO/SB/08A/08B
- 3) 180 References
- 4) Return Postcard

Applicant: Choo et al.

Application No.: 09/424,482

Filing Date: February 29, 2000

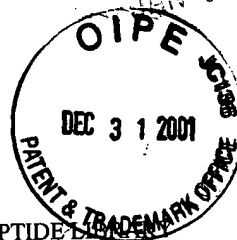
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Date of Mailing: 12/7/2001

Attorney: JOL sec. crf

Attorney Docket: 019496-006210US



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Choo et al.

Application No.: 09/424,482

Filed: February 29, 2000

For: NUCLEIC ACID BINDING
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Examiner: Wessendorf, T.

Art Unit: 1627

**SUPPLEMENTAL INFORMATION
DISCLOSURE STATEMENT UNDER 37
CFR §1.97 and §1.98**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

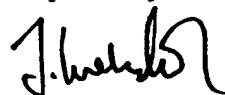
The references cited on attached form PTO/SB/08A/08B are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR §§ 1.97(g) and (h), no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information, and no inference should be made that the information and references cited are, or are considered to be material to patentability because they are in this statement. No inference should be made that the information and references cited are prior art merely because they are in this statement.

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Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Joe Liebeschuetz
Reg. No. 37,505

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet **1** of **2**

Complete If Known

Application Number	09/424,482
Filing Date	02/29/00
First Named Inventor	Choo
Group Art Unit	1627
Examiner Name	Wessendorf, T.
Attorney Docket Number	019496-006210US

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	1	6,013,453		Choo et al.	01-11-2000	
	2	6,007,988		Choo et al.	12-28-1999	
	3	6,001,885		Vega et al.	12-14-1999	
	4	5,972,615		An et al.	10-26-1999	
	5	5,939,538		Leavitt et al.	08-17-1999	
	6	5,916,794		Chandrasegaran	06-29-1999	
	7	5,871,907		Winter et al.	02-16-1999	
	8	5,871,902		Weininger et al.	02-16-1999	
	9	5,869,618		Lippman et al.	02-9-1999	
	10	5,792,640		Chandrasegaran	08-11-1998	
	11	5,789,538		Rebar et al.	08-04-1998	
	12	5,702,914		Evans et al.	12-30-1997	
	13	5,674,738		Abramson et al.	10-07-1997	
	14	5,639,592		Evans et al.	06-17-1997	
	15	5,597,693		Evans et al.	01-28-1997	
	16	5,578,483		Evans et al.	11-26-1996	
	17	5,498,530		Schatz et al.	03-12-1996	
	18	5,487,994		Chandrasegaran	01-30-1996	
	19	5,436,150		Chandrasegaran	07-25-1995	
	20	5,403,484		Ladner et al.	04-04-1995	
	21	5,376,530		De The et al.	12-27-1994	
	22	5,356,802		Chandrasegaran	10-18-1994	
	23	5,350,840		Call et al.	09-27-1994	
	24	5,348,864		Barbacid	09-20-1994	
	25	5,340,739		Stevens et al.	08-23-1994	
	26	5,324,819		Oppermann et al.	06-28-1994	
	27	5,324,818		Nabel et al.	06-28-1994	
	28	5,324,638		Tao et al.	06-28-1994	
	29	5,302,519		Blackwood et al.	04-12-1994	
	30	5,243,041		Fernandez-Pol	09-07-1993	
	31	5,223,409		Ladner et al.	06-29-1993	
	32	5,198,346		Ladner et al.	03-30-1993	

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Application Number	09/424,482
Filing Date	02/29/00
First Named Inventor	Choo
Group Art Unit	1627
Examiner Name	Wessendorf, T.
Attorney Docket Number	019496-006210US

33	5,096,815	Ladner et al.	03-17-1992
34	5,096,814	Aivasidis et al.	03-17-1992
35	4,990,607	Katagiri et al.	02-05-1991

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ²
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
	36	PCT	WO 99/48909	A2		09-30-1999		
	37	PCT	WO 99/47656	A2		09-23-1999		
	38	PCT	WO 99/45132	A1		09-10-1999		
	39	PCT	WO 99/42474	A2		08-26-1999		
	40	PCT	WO 99/41371	A1		08-19-1999		
	41	PCT	WO 99/36553	A2		07-22-1999		
	42	PCT	WO 98/54311	A1		12-03-1998		
	43	PCT	WO 98/53060	A1		11-26-1998		
	44	PCT	WO 98/53059	A1		11-26-1998		
	45	PCT	WO 98/53058	A1		11-26-1998		
	46	PCT	WO 98/53057	A1		11-26-1998		
	47	PCT	WO 97/27213	A1		07-31-1997		
	48	PCT	WO 97/27212	A1		07-31-1997		
	49	PCT	WO 96/32475	A2		10-17-1996		
	50	PCT	WO 96/20951	A1		07-11-1996		
	51	PCT	WO 96/11267	A1		04-08-1996		
	52	PCT	WO 96/06110	A1		02-29-1996		
	53	PCT	WO 95/19431	A1		07-25-1995		
	54	EP	875 567	A2		11-04-1998		

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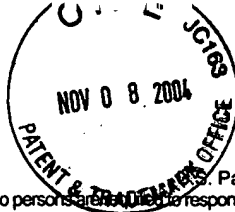
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Application Number	09/424,482
Filing Date	February 29, 2000
First Named Inventor	Choo
Group Art Unit	1627
Examiner Name	Wessendorf, T.
Attorney Docket Number	019496-006210US

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	55	AGARWAL et al., "Stimulation of Transcript Elongation Requires both the Zinc Finger and RNA Polymerase II Binding Domains of Human TFIIS," <i>Biochemistry</i> , 30(31):7842-7851 (1991).	
	56	ANATO et al., "A thermodynamic study of unusually stable RNA and DNA hairpins," <i>Nuc. Acids. Res.</i> , 19(21):5901-5905 (1991).	
	57	BARBAS, C. F., "Recent advances in phage display," <i>Curr. Opin. Biotech.</i> , 4:526-530 (1993).	
	58	BARBAS et al., "Assembly of combinatorial antibody libraries on phage surfaces: The gene III site," <i>PNAS</i> , 88:7978-7982 (1991).	
	59	BARBAS et al., "Semisynthetic combinatorial antibody libraries: A chemical solution to the diversity problem," <i>PNAS</i> , 89:4457-4461 (1992).	
	60	BELLEFRROID et al., "Clustered organization of homologous KRAB zinc-finger genes with enhanced expression in human T lymphoid cells," <i>EMBO J.</i> , 12(4):1363-1374 (1993).	
	61	BERG, J. M., "DNA Binding Specificity of Steroid Receptors," <i>Cell</i> , 57:1065-1068 (1989).	
	62	BERG, J. M., "Sp1 and the subfamily of zinc finger proteins with guanine-rich binding sites," <i>PNAS</i> , 89:11109-11110 (1992).	
	63	BERG et al., "The Galvanization of Biology: A Growing Appreciation for the Roles of Zinc," <i>Science</i> , 271:1081-1085 (1996).	
	64	BERG, J. M., "Letting your fingers do the walking," <i>Nature Biotechnology</i> , 15:323 (1997)	
	65	BERGQVIST et al., "Loss of DNA-binding and new transcriptional <i>trans</i> -activation function in polyomavirus large T-antigen with mutation of zinc finger motif," <i>Nuc. Acids Res.</i> , 18(9):2715-2720 (1990).	
	66	BLAESE et al., "Vectors in cancer therapy: how will they deliver?," <i>Cancer Gene Therapy</i> , 2(4):291-297 (1995).	
	67	CAPONIGRO et al., "Transdominant genetice analysis of a growth control pathway," <i>PNAS</i> , 95:7508-7513 (1998)	
	68	CELENZA et al., "A Yeast Gene That Is Essential for Release from Glucose Repression Encodes a Protein Kinase," <i>Science</i> , 233:1175-1180 (1986).	
	69	CHENG et al., "Identification of Potential Target Genes for Adrlp through Characterization of Essential Nucleotides in UAS1," <i>Mol. Cellular Biol.</i> , 14(6):3842-3852 (1994).	
	70	CHENG et al., "A Single Amino Acid substitution in Zinc Finger 2 of Adrlp Changes its Binding Specificity at two Positions in UAS1," <i>J. Mol. Biol.</i> , 251:1-8 (1995)	
	71	CHOO et al., "A role in DNA binding for the linker sequences of the first three zinc fingers of TFIIIA," <i>Nuc. Acids Res.</i> , 21(15):3341-3346 (1993).	
	72	CHOO et al., "Promoter-specific Activation of Gene Expression Directed by Bacteriophage-selected Zinc Fingers," <i>J. Mol. Biol.</i> , 273:525-532 (1997).	
	73	CHOO, Y., "Recognition of DNA methylation by zinc fingers," <i>Nature Struct. Biol.</i> , 5(4):264-265 (1998).	

Examiner
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Date
Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 7

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Application Number	09/424,482
Filing Date	February 29, 2000
First Named Inventor	Choo
Group Art Unit	1627
Examiner Name	Wessendorf, T.
Attorney Docket Number	019496-006210US

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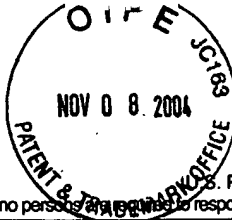
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Filing Date	February 29, 2000
First Named Inventor	Choo
Group Art Unit	1627
Examiner Name	Wessendorf, T.
Attorney Docket Number	019496-006210US

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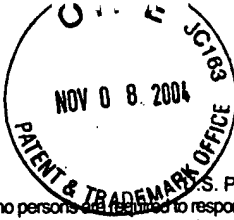
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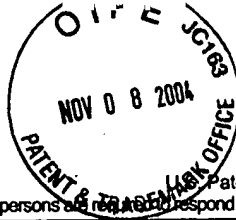
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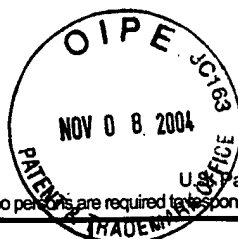
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Application Number	09/424,482
Filing Date	February 29, 2000
First Named Inventor	Choo
Group Art Unit	1627
Examiner Name	Wessendorf, T.
Attorney Docket Number	019496-006210US

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Examiner
Signature

Date
Considered

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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